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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/643,017	08/21/2000	Jes Thyssen	50944.8500/99RSS219	8562
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25700 7590 01/02/2003

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EXAMINER

AZAD, ABUL K

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/643,017

Applicant(s)

THYSSEN, JES

Examiner

ABUL K. AZAD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1. This action is in response to the application filed on August 21, 2000.
2. Claims 1-23 are pending in this office action.

### ***Drawings***

3. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

### ***Information Disclosure Statement***

4. The information disclosure statement, IDS-PTO-1449, Paper No. 2 have been considered. The applicant stated in the IDS that the applicant is not aware of any reference for consideration by the patent office.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1, 2, 6 and 7 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent

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No. 6,240,386. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are substantially similar in scope and they uses same limitations, please see explanation below:

Claims 1, 2, 6 and 7 of instant has similar limitations of claim 1 of Pat '386 as follows: (a) receiving a signal at a processing unit (inherent, receiving a signal); (b) providing at least one basic parameter corresponding to the signal (Pat '386, claim 1, generate speech parameters); (c) if present, estimating a noise component of the parameter (Pat '386, claim 1, noise classification); and (d) if present, removing the noise component from the parameter (Pat '386, claim 1, performing noise compensation).

As per claim 2, "the step of determining whether the signal is speech or non-speech" (Pat '386, noise classification).

As per claims 6 and 7, "the step of providing comprises deriving/receiving at least one basic parameter corresponding to the signal" (Pat '386, generates speech parameters).

Claim 1 of Pat '386 also claimed "a decoder, communicatively coupled to the encoder, that reproduces the speech signal from the speech parameters". Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to omit the limitation a decoder, which is communicatively coupled to the encoder because particularly claim the encoder's operations without claiming a encoder and decoder complex operation. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. In

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re Karison, 136 USPQ 184 (CCPA). Also note Ex parte Rainu, 168 USPQ 375 (Bd. App. 1969); the omission of reference element whose function is not needed would be obvious to one skilled in the art.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Gupta et al. (US 5,459,814).

As per claim 1, Gupta teaches, “a method for obtaining a set of parameters used for classification comprising the steps of” (col. 3, lines 29-67, here speech is classified as voiced and un-voiced groups and from there a speech and noise is discriminated and parameters are use as level, slope and zero crossing for classifying signals):

“receiving a signal at a processing unit” (col. 4, lines 8-10, reads on “speech signal is input to block 1”);

“providing at least one basic parameter corresponding to the signal” (col. 4, line 12 to col. 5, line 31; here different parameter is provided such as level, slope and zero crossing one of them is a basic parameter corresponding to the signal);

“if present, estimating a noise component of the parameter” (col. 6, lines 1-52, background noise); and

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“if present, removing the noise component from the parameter” (col. 6, lines 1-13, reads on “an average background noise level is computed by sampling the average level at 1 kHz and using the filter in equation 1”).

As per claim 2, Gupta teaches, “the step of determining whether the signal is speech or non-speech” (Fig. 4).

As per claim 3, Gupta teaches, “the step of providing at least one additional parameter” (col. 3, line 50 to col. 4, line 5, here slope and Zero Crossing is additional parameters).

As per claim 4, Gupta teaches, “wherein the noise component is present and the step of providing at least one additional parameter is in response to the noise component” (Fig. 4, col. 5, lines 5-31, here additional parameters are zero crossing and slope in response to the noise).

As per claim 5, Gupta teaches, “the step of updating the noise parameters if the signal is non-speech” (col. 6, lines 18-32, reads on “the level thresholds are update only if the average level is within 12.5% of the average background noise to avoid the updates during speech”).

As per claim 6, Gupta teaches, “the step of providing comprises deriving at least one basic parameter corresponding to the signal” (Fig. 3, the basic parameter average level is calculate corresponding to the signal).

As per claim 7, Gupta teaches, “wherein the step of providing comprises receiving at least one basic parameter corresponding to the signal” (Fig. 3, the basic parameter average level is calculate corresponding to the signal).

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As per claim 8, Gupta teaches, "a method for classifying speech comprising the steps of":

"receiving a speech-related signal at a processing unit" (col. 4, lines 8-10, reads on "speech signal is input to block 1");

"providing at least one parameter to be used for classifying the signal" (col. 4, line 12 to col. 5, line 31; here different parameter is provided such as level, slope and zero crossing one of them is a basic parameter corresponding to the signal);

"estimating a noise component of the parameter" (col. 6, lines 1-52, background noise);

"removing the noise component from the parameter" (col. 6, lines 1-13, reads on "an average background noise level is computed by sampling the average level at 1 kHz and using the filter in equation 1");

"comparing the parameter with a set of at least one threshold" (col. 5, lines 5-31, here different threshold is used for different parameter); and

"associating the signal with a class in response to the comparing step" (col. 5, lines 5-31, here different class of signal is determined based on the comparing with the threshold level).

As per claim 9, Gupta teaches, "the step of determining whether the signal is speech or non-speech" (col. 3, line 47 to col. 4, lines 21, reads on "the characteristics of these two groups are used to discriminate between speech and noise").

As per claim 10, Gupta teaches, "the step of updating a noise component if the signal is non-speech" (col. 6, lines 18-32, reads on "the level thresholds are update only

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if the average level is within 12.5% of the average background noise to avoid the updates during speech”).

As per claim 11, Gupta teaches, “wherein at least one parameter is derived to classify the signal” (Fig. 3, the average level is calculate corresponding to the signal to classify the signal).

As per claim 12, Gupta teaches, “wherein a set of basic parameters is derived and at least one noise component parameter” (Fig. 4, col. 5, lines 5-31, here additional parameters are zero crossing and slope in response to the noise).

As per claim 13, Gupta teaches, “wherein said comparing step comprises: identifying at least one characteristic of the signal with at least one the parameters; setting a flag to indicate the characteristic is present; receiving at least one flag in a final decision module; and associating a class with at least one flag” (col. 5, lines 5-67, here at least one characteristic of the signal is level characteristic with one parameters and a flag is to indicate the characteristic is present or not; and a final decision module as decision block which determines the class based on at least one flag).

As per claim 14, Gupta teaches, “wherein at least one parameter is received to classify the signal” (col. 3, line 50 to col. 4, line 5, here level, slope and Zero Crossing are parameters to classify the signals).

As per claim 15, Gupta teaches, “a method for perceptually matching a speech signal in a speech coding device having at least one process module” (col. 2, lines 41 to 66, here CELP coder is used and a DSP as process modules), the method comprising the steps of:



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“receiving the signal at the speech coding device” (col. 4, lines 8-10, reads on “speech signal is input to block 1”);

“deriving a plurality of signal parameters in the process module” (col. 4, line 12 to col. 5, line 31; here plurality of parameters are provided such as level, slope and zero crossing parameters);

“weighting the parameters” (col. 4, lines 12-67, weighting is done by low pass filter);

“associating a particular signal characteristic with the signal parameters” (col. 3, line 41 to col. 4, line 5, here voiced and unvoiced is discriminated based on the particular signal characteristic);

“setting a flag in the process module when the characteristic is identified” (col. 5, lines 5-31, flag);

“comparing the flags” (col. 5, lines 5-31, reads on “the above parameters are compared to a set of thresholds to set the VAD activity flag”); and

“classifying the signal according to one of the comparing step or the deriving step” (col. 5, lines 5-31, VAD is determined based on the comparing step).

As per claim 16, Gupta teaches, “wherein said deriving step comprises deriving a set of basic parameters and deriving a set of noise-related parameters” (col. 5, lines 5-31, level parameter as basic parameter and zero crossing and slope are noise related parameters).

As per claim 17, Gupta teaches, “wherein said weighting step comprises: estimating a noise component of the parameter in the process modules; and removing

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the noise component of the parameter in the process module" (col. 6, lines 1-13, reads on "an average background noise level is computed by sampling the average level at 1 kHz and using the filter in equation 1").

As per claim 18, Gupta teaches, "wherein said weighting step comprises a set of noise estimation equations" (col. 4, lines 12-67, equations are noise estimation equations).

As per claim 19, Gupta teaches, "a method for speech coding whereby a set of homogeneous parameters is provided for classifying a signal" (col. 3, line 47 to col. 4, line 5, here level, slope and zero crossing parameters are homogeneous parameters), the set of parameters being uninfluenced by a background noise (col. 5, lines 5-31, parameters are uninfluenced by a background noise because the thresholds are updated based on the noise).

As per claim 20, Gupta teaches, "a method for speech communication whereby influence from speech-related noise is reduced", the method comprising the steps of:

"receiving a digital speech-related signal at a speech processing device" (col. 4, lines 8-10, reads on "speech signal is input to block 1");

"forming a set of homogenous parameters" (col. 3, line 47 to col. 4, line 20, level, slope and zero crossing are homogenous parameters);

"comparing the parameters with a threshold" (col. 5, lines 5-31, reads on "the above parameters are compared to a set of thresholds to set the VAD activity flag"); and

"classifying the signal" (col. 5, lines 5-31, VAD is determined based on the comparing step).

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As per claim 21, Gupta teaches, "wherein the forming step comprises forming a set of "noise-free" parameters" (col. 3, lines 29-50, noise canceling microphone and echo canceller is employed to provide a set of "noise-free" parameters).

As per claim 22, Gupta teaches, "wherein the forming step comprises: estimating a noise component; and removing the noise component" (col. 6, lines 1-13, reads on "an average background noise level is computed by sampling the average level at 1 kHz and using the filter in equation 1").

As per claim 23, Gupta teaches, "wherein the comparing step is with a set of thresholds" (col. 5, lines 5-31, reads on "the above parameters are compared to a set of thresholds to set the VAD activity flag").

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***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-3838**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Marsha D. Banks-Harold**, can be reached at **(703) 305-4379**.

Any response to this action should be mailed to:

**Commissioner for Patents**

**Washington, D.C. 20231**

Or faxed to:

**(703) 872-9314**

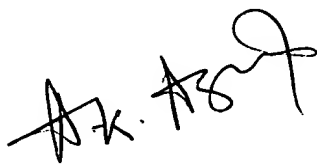
(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center's Customer Service Office whose telephone number is **(703) 306-0377**.

Abul K. Azad

December 29, 2002

A handwritten signature in black ink, appearing to read 'A.K. Azad', is written over the typed name and date.